



# First Time for Everything

by Ltjg. Abraham Younce, USNR

The crew originally scheduled for an event had to cancel, and a newly designated HAC, showing some initiative, volunteered to get his first HAC flight out of the way. I went along to knock out one of my H2P syllabus hops. It would be my fourth flight since leaving the FRS.

We decided to fly VFR to Camp Pendleton, shoot some approaches, then return VFR to North Island—a simple plan. Keeping in mind the relative lack of experience in the cockpit, we made it a point to discuss the importance of aircrew coordination during the aircrew brief.

The flight to Pendleton went fine. We shot three approaches, fighting a 20-knot left crosswind on final. We executed our last missed approach and began our transit back to North Island. The HAC had flown the last TACAN approach, and he canceled IFR handling once we were over the water. He descended to 500 feet and accelerated to 120 knots before passing me the controls for the flight home. About five seconds later, we felt an unusual vibration. It started out as a lateral one-per vibration but very quickly developed into a dramatic vertical vibe, with the nose pitching plus and minus 10-to-15 degrees. The vibrations were fully developed in less than a minute.

Immediately after the nose started pitching, the HAC said, “I have the controls.” He decelerated, trying to minimize the vibrations. I didn’t notice much change—the vibrations became more stable but no less violent. Our

crewman in back was very uncomfortable and asked, “Are we gonna land this thing?”

The HAC replied, “Roger, we’re going for the beach.”

I assumed this meant that we were going to land on the sand between the water and the cliffs, if we made it that far. The aircrewman wanted us to get down immediately. After the flight, I asked him how bad he thought the vibes were. He said that from his perspective, he was willing to set the aircraft in the water in order to stop vibrating.

After rolling out of our turn pointed at the beach, I noticed the master-caution light. A quick check of the panel showed a caution light for the stability augmentation system. I pointed this out to the HAC, and he said that he had released the automatic flight-control system with his cyclic switch, in an effort to troubleshoot our vibrations. It didn’t feel like this had helped, but the HAC didn’t call for AFCS to be re-engaged. I assumed that he didn’t want it on. He then asked me to find the frequency for Palomar Airport on the VFR sectional. It was about four miles inland at our 12 o’clock. I wasn’t able to read the chart because of the vibrations. We were now approximately 90 seconds into the emergency. The HAC told me to switch the radio to guard just as the aircrewman asked, “Are we gonna declare something?”

The HAC rogered and made a mayday call. I locked my harness, but I didn’t switch our transponder to emer-

gency. The HAC began shooting an approach to the beach, steadily descending and slowing down. It seemed like forever before someone responded to our mayday, and when they did, it was to ask us to repeat it. We ended up repeating our position three times before it got through. After listening to a tape of the transmission, I can understand why. It was so broken up by the vibrations that only one in three syllables was intelligible.

While the HAC was repeating himself over the radio, I looked down at the water and wondered if I was going to need my HEEDS bottle. I began calling out our altitude, using the radar altimeter, to back up the HAC. I could barely focus on the needle because we were bouncing around so much. I found out later that he either didn't hear me or was concentrating on the approach so much that my calls didn't register. As we neared the beach, we could see dozens of people enjoying the beautiful day. I began flashing the searchlight to get them to move, but it wasn't working. At this point, we were just looking for a clear space on dry land. The aircrewman called for us to land in a parking lot that he remembered, but neither of us saw it up front.

To our surprise, the vibrations lessened considerably as we got into ground effect at 40 feet. The strong winds out of the north definitely helped keep us in translational lift, and we started an air taxi. We were about 20 yards from the beach, and the helicopter was behaving almost normally. We briefly paused to reassess the situation. A divided highway ran along the cliffs bordering the beach. The HAC continued air taxiing toward it as the aircrewman and I called positions. The cars that had been heading toward us stopped when they saw that we were going to land. We made a no-hover landing in a cloud of dust.

One of the hydraulic lines leading to a main-rotor-blade damper had ruptured, allowing the fluid for all four dampers to bleed out. The outcome could have been a lot worse, especially if we had landed our 18,000-pound helicopter in the soft sand at low tide. Four aspects of ACT had helped us avoid that conclusion: decision making, adaptability and flexibility, situational awareness, and communication.

Instead of turning immediately toward land, we could have continued on our way, trying to troubleshoot the problem. Who knows what parts would have shaken loose if we had tried to fly home? When the vibration levels decreased as we entered ground effect, we had another chance to adapt our plan. We went from concentrating on saving ourselves to also saving the aircraft.

I had made a lot of assumptions based on my assessment of the situation. I should have been talking to the rest of the crew more to make sure we were all seeing the same thing. We communicated well when deciding what to do about the problem, but we didn't re-engage the AFCS after turning it off to troubleshoot. I don't know if it would have made a difference in how the helicopter was flying, but the system is designed to decrease pilot workload. When deciding exactly where to land, the flow of information from the pilots to the aircrewman could have been better. I assumed I knew what the HAC meant when he said we were going for the beach. It turns out I was right, but I could have made sure. Situational awareness is even more important in an emergency, and counting on being lucky in this profession is not a good idea. 🦅

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# On Cat 1

## Coming Attractions for December

- Fly-In Follies
- Been Violated Recently?
- Electro-Shock Therapy
- Hot Potato With the Flight Controls